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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/557,511	11/21/2005	Jee Ho Kim	LEE-0042	8814
23413 7590 06/26/2009 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER CHU, HELEN OK				
ART UNIT		PAPER NUMBER		
1795				
NOTIFICATION DATE		DELIVERY MODE		
06/26/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary

Application No.

10/557,511

Applicant(s)

KIM ET AL.

Examiner

Helen O. Chu

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 6/11/09, 4/27/09, 9/18/07, 3/22/06, 11/21/2005 was filed. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

3. The drawings were received on 11/21/05. These drawings are acceptable.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the recitation "regular shape" The subject matter of a claim must still have definite boundaries, no matter how broad or narrow. While a skilled artisan may be able to select a shape, the artisan would not know what the limits or boundaries of the possible shapes are.

Claims Analysis

5. For the purposes of compact prosecution the term "regular shape" will be interpreted as "any shape."

Claim Rejections - 35 USC § 102/103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 5-8, 10, 11 rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103 (a) as obvious over Kawakami (US Patent 5,853,914).

Regarding claims 1, 3, 5, 6, 8, 11, the Kawakami reference discloses a battery with a cathode and anode and a sheet (Applicant's regular shape) of separator comprising gel coated on one side (approximately 50%) of the separator surfaces (Fig. 3(d)) and uncoated on the other separator surface in which anticipates the claimed invention. In addition, the Kawakami reference does not specifically disclose, a coating

of gel polymer over 40-60% of a total separator area, however, the Kawakami reference discloses that the size of the gel sheet can be controlled to distribute a given pressure(5:15-25). Therefore, it would have been obvious to one of skilled in the art at the time the invention was made to Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to choose the instantly claimed value through process optimization, since it has been held that the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable values involve only routine skill in the art. See *In re Boesch*, 205 USPQ 215 (CCPA 1980). The battery assembly further comprises a cathode current collector (Applicants' positive terminal; 814) and anode current collector (Applicants' negative terminal; 822) connected to a aluminum plate (820; 25:5-10))

Regarding claims 2, 6, 7, 10, It is noted that theses claims are product-by-process claims. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since separator is the same as that of the Applicant's, Applicant's process is not given patentable weight in this claim.

Regarding claims 4, 9 and 12, the Kawakami et al. reference discloses copolymers and crosslinked polymers as the gel polymer (9-10:30-35)

8. Claims 1-3, 5-8, 10, 11, 12 are rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103 (a) as obvious over Lee et al. (US Publication 2002/0187401).

Regarding claims 1, 3-5, 11, 12, the Lee reference discloses a battery with a electrode and a counter electrode (Applicants anode and cathode; P126) and a polyvinylidene fluoride sheet (Applicant's regular shape) separator comprising gel coated on one side (approximately 50%) of the separator surfaces (P36) and uncoated on the other separator surface in which anticipates the claimed invention. In addition, the Lee reference does not specifically disclose, a coating of gel polymer over 40-60% of a total separator area, however, the Lee reference discloses that the gel component contributes to good wet-out rate, good ionic conductivity (P11). Therefore, it would have been obvious to one of skilled in the art at the time the invention was made to

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to choose the instantly claimed value through process optimization, since it has been held that the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable values involve only routine skill in the art. See *In re Boesch*, 205 USPQ 215 (CCPA 1980).

Regarding claims 2, 10, It is noted that theses claims are product-by-process claims. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is

unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since separator is the same as that of the Applicant's, Applicant's process is not given patentable weight in this claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen O. Chu whose telephone number is (571) 272-5162. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HOC

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795